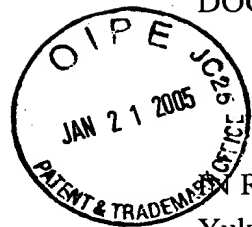


JPW

DOCKET NO.: 215255US90/mya



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

RE APPLICATION OF:

Yukiko HANADA, et al.

SERIAL NO: 09/981,988

GROUP: 2631

FILED: October 19, 2001

EXAMINER:

FOR: SPREADING CODE SYNCHRONIZATION METHOD, RECEIVER, AND  
MOBILE STATION

**LETTER**

Mail Stop DD  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith is a Singapore Search Report and Written Opinion for the Examiner's consideration. The reference(s) cited therein have been previously filed on January 22, 2002 and September 5, 2003.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

  
Bradley D. Lytle

Registration No. 40,073

Joseph Scafetta, Jr.  
Registration No. 26,803

Customer Number

**22850**

Tel. (703) 413-3000  
Fax. (703) 413-2220  
(OSMMN 10/04)



INTELLECTUAL PROPERTY  
OFFICE OF SINGAPORE

51 Bras Basah Road #04-01  
Plaza By The Park Singapore 189554  
Tel: (65) 63398616 Fax: (65) 63390252  
<http://www.ipos.gov.sg>

RF000B

In Reply Please Quote Our Reference

Your Ref : MJ/GK/LWC/PAT/8107052/SG  
Our Ref : 2001064922/041210/TMABS/4293  
Date : 10/12/2004  
Writer's Direct Line : 6330 2748

DREW & NAPIER LLC  
P.O. BOX 152, ROBINSON ROAD POST OFFICE  
SINGAPORE 900302

Dear Sir,

Singapore Patent Application No.: 200106492-2  
Title of invention: **SPREADING CODE SYNCHRONIZATION METHOD, RECEIVER, AND MOBILE STATION**  
Applicant(s) / Proprietors(s): **NTT DOCOMO, INC. (JP)**

**INVITATION TO RESPOND TO WRITTEN OPINION**

We forward with this letter a copy of the Search Report and Written Opinion drawn up by the Examiner in connection with your request for a Search and Examination Report.

You are invited to respond to the opinion by submitting:

- (a) Written arguments disagreeing with the Examiner's opinion and/or
- (b) An amendment of the specification of the application.

If you intend to respond, the response must be filed within 5 months from the date of this letter. You are also advised to inform us early if you do not intend to respond.

The Examiner will proceed to establish the Examination Report if no response is received by the end of the allowed period.

If you have any further queries, please do not hesitate to contact the undersigned.

Thank you.

Yours faithfully,

Annie Besant d/o Surendran  
for REGISTRAR OF PATENTS  
SINGAPORE

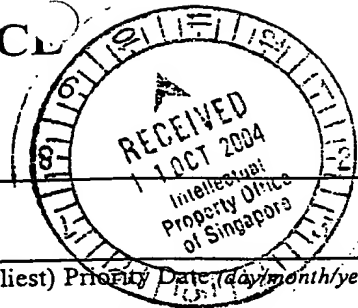
CC: IP AUSTRALIA

A statutory board of the Ministry of Law



# AUSTRALIAN PATENT OFFICE

## SEARCH REPORT



Applicant's or agent's file reference <b>MJ/GK/LWC/PAT/8107052/SG</b>		
Application No. <b>SG 200106492-2</b>	Application Filing Date ( <i>day/month/year</i> ) <b>19 October 2001</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>19 October 2000</b>
Applicant <b>NTT DOCOMO, INC. (JP)</b>		

This search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. ☐ Certain claims were found unsearchable (See Box I)
2. ☐ Unity of invention is lacking (See Box II)
3. ☐ The application contains disclosure of a nucleotide and/or amino acid sequence listing and the search was carried out on the basis of the sequence listing
  - ☐ filed with the application
  - ☐ furnished by the applicant separately from the application,
  - ☐ but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in application as filed
4. With regard to the title,
  - ☒ the text is approved as submitted by the applicant.
  - ☐ the text has been established by this Office to read as follows:
5. With regard to the abstract,
  - ☐ the text is approved as submitted by the applicant
  - ☒ the text has been established by this Office as it appears in Box III
6. The figure of the drawings to be published with the abstract is Figure No. 1
  - ☐ as suggested by the applicant.
  - ☐ because the applicant failed to suggest a figure
  - ☒ because this figure better characterises the invention
  - ☐ None of the figures

**Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)**

Disclosed is a method for fast cell search during soft hand-over in an inter-cell asynchronous system. During spreading code synchronisation correlation between a received signal and a common short code is made which is then used to determine a scrambling code mask. The received scrambling code mask of the current cell is excluded in the search for hand-over destination cells. For each candidate scrambling code the correlation between the received signal and a code of a product of a scrambling code and a common short code at the received timing of the scrambling code mask of a detected hand-over destination cell is detected. The correlation values are used to identify the scrambling code of the hand-over destination cell.

# AUSTRALIAN PATENT OFFICE

## SEARCH REPORT

Application No.

SG 200106492-2

### A. CLASSIFICATION OF SUBJECT MATTER

According to International Patent Classification (IPC)

Int. Cl. <sup>7</sup> H04B 7/26

### B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the search (name of data base and, where practicable, search terms used)

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
<p>EP 0825737 A1 (NTT MOBILE COMMUNICATIONS NETWORK INC.) 25 February 1998 Whole document including column 17 lines 5 to 17.</p> <p>X</p>		1 to 13
<p>"UMTS Terrestrial Radio Access Concept Evaluation", ETSI TECHNICAL REPORT, December 1997, pages 47 to 48.</p> <p>X</p>		1 to 13
<p>HANADA Y et al: "Fast Cell Search Algorithm in Idle Mode for Inter-cell Asynchronous W-CDMA Mobile Radio", Cryptologia, Laguna Hills, CA, US, Vol. E83B, no. 8 August 2000, pages 1610 to 1618.</p> <p>X</p>		1 to 13

☐ Further documents are listed in the continuation of Box C

☒ See patent family annex

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of submission of the request to the Australian Patent Office

23 July 2004

Date of completion of the search report

23 September 2004

Date of mailing of the search report

- 6 OCT 2004

Name and mailing address

AUSTRALIAN PATENT OFFICE  
PO BOX 200, WODEN ACT 2606, AUSTRALIA  
E-mail address: pct@ipaaustralia.gov.au  
Facsimile No. 61 2 62853929

Authorised officer

RICHARD REED

Patent Document Cited in  
Search Report

## Patent Family Member

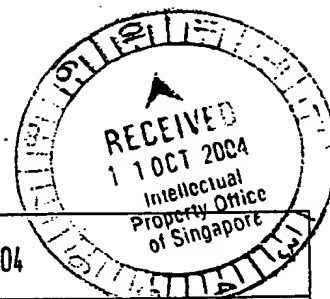
EP	0825737	CA	2217575	CN	1180463	CN	1197549
		CN	1390000	EP	0839392	JP	9307153
		JP	10004224	JP	10004225	JP	10012941
		JP	10012942	US	5998909	US	6167037
		WO	9733400	WO	9743791		

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX

# AUSTRALIAN PATENT OFFICE

## WRITTEN OPINION



Date of mailing <i>day/month/year</i>		- 6 OCT 2004
Applicant's or agent's file reference MJ/GK/LWC/PAT/8107052/SG		REPLY DUE within FIVE MONTHS of the date of the Registrar's letter enclosing the written opinion
Application No. SG 200106492-2	Application Filing Date ( <i>day/month/year</i> ) 19 October 2001	Priority Date ( <i>day/month/year</i> ) 19 October 2000
International Patent Classification (IPC) (as indicated in the search report) Int. Cl. <sup>7</sup> H04B 7/26		
Applicant NTT DOCOMO, INC. (JP)		

1. This First written opinion consists of a total of 4 sheets.
2. This opinion contains indications relating to the following items:
  - I ☒ Basis of the opinion
  - II ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - III ☐ Lack of unity of invention
  - IV ☒ Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - V ☐ Certain documents cited
  - VI ☐ Certain defects in the application
  - VII ☒ Certain observations on the application
3. This opinion is based upon the assumption that the priority claim is valid.
4. The search report used was issued by the Australian Patent Office, and the date of completion is: 23 September 2004
5. If no reply is filed, the examination report will be established on the basis of this opinion.
6. The date by which the examination report will be established is: 19 January 2005

Name and mailing address AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile no. 61 2 62853929	Authorized Officer  RICHARD REED
--	--

I. Basis of the opinion

1. This opinion has been drawn on the basis of:

☒ the application as originally filed.

☐ the description, pages , as originally filed,  
pages , filed with the request,  
pages , received on with the letter of

☐ the claims, pages , as originally filed,  
pages , filed with the request,  
pages , received on with the letter of

☐ the drawings, sheets/fig. , as originally filed,  
sheets/fig. , filed with the request,  
sheets/fig. , received on with the letters of

☐ the sequence listing part of the description:  
pages , as originally filed  
pages , filed with the demand  
pages , received on with the letter of

2. The amendments have resulted in the cancellation of: pages:  
sheets of drawings/figures No :

3. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box.

4. Additional observations, if necessary:

*Abstract.*



IV. Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims None	YES
	Claims 1 to 13	NO
Inventive step (IS)	Claims None	YES
	Claims 1 to 13	NO
Industrial applicability (IA)	Claims 1 to 13	YES
	Claims None	NO

2. Citations and explanations

The associated search report cited:

- D1 = EP 0825737 A1 (NTT MOBILE COMMUNICATIONS NETWORK INC.) 25 February 1998  
Whole document including column 17 lines 5 to 17
- D2 = "UMTS Terrestrial Radio Access Concept Evaluation", ETSI TECHNICAL REPORT,  
December 1997, pages 47 to 48.
- D3 = HANADA Y et al: "Fast Cell Search Algorithm in Idle Mode for Inter-cell Asynchronous W-  
CDMA Mobile Radio", Cryptologia, Laguna Hills, CA, US, Vol. E83B, no. 8 August 2000,  
pages 1610 to 1618.

Novelty

Claims 1 to 13 lack novelty in light of D1 to D3. These documents separately teach a fast synchronisation scheme for W-CDMA using a masked and unmasked version of a long spreading code where each spreading code is specific to a cell and a common short spreading code. The scheme leads to "received timings" which are subsequently used to orientate long code detection.

Inventive Step

Claims 1 to 13 define an invention that lacks an inventive step in light of D1 to D3. This follows since all features are taught.

Industrial Applicability

Claims 1 to 13 define an invention having industrial applicability in the field of mobile communications and the determination of a correct spreading code.

**VII. Certain observations on the application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

- ☒ The claimed invention is patentable according to Section 13(2); or
- ☐ The claimed invention is unpatentable according to Section 13(2) because: